

# Fat Embolism Syndrome

What is it?

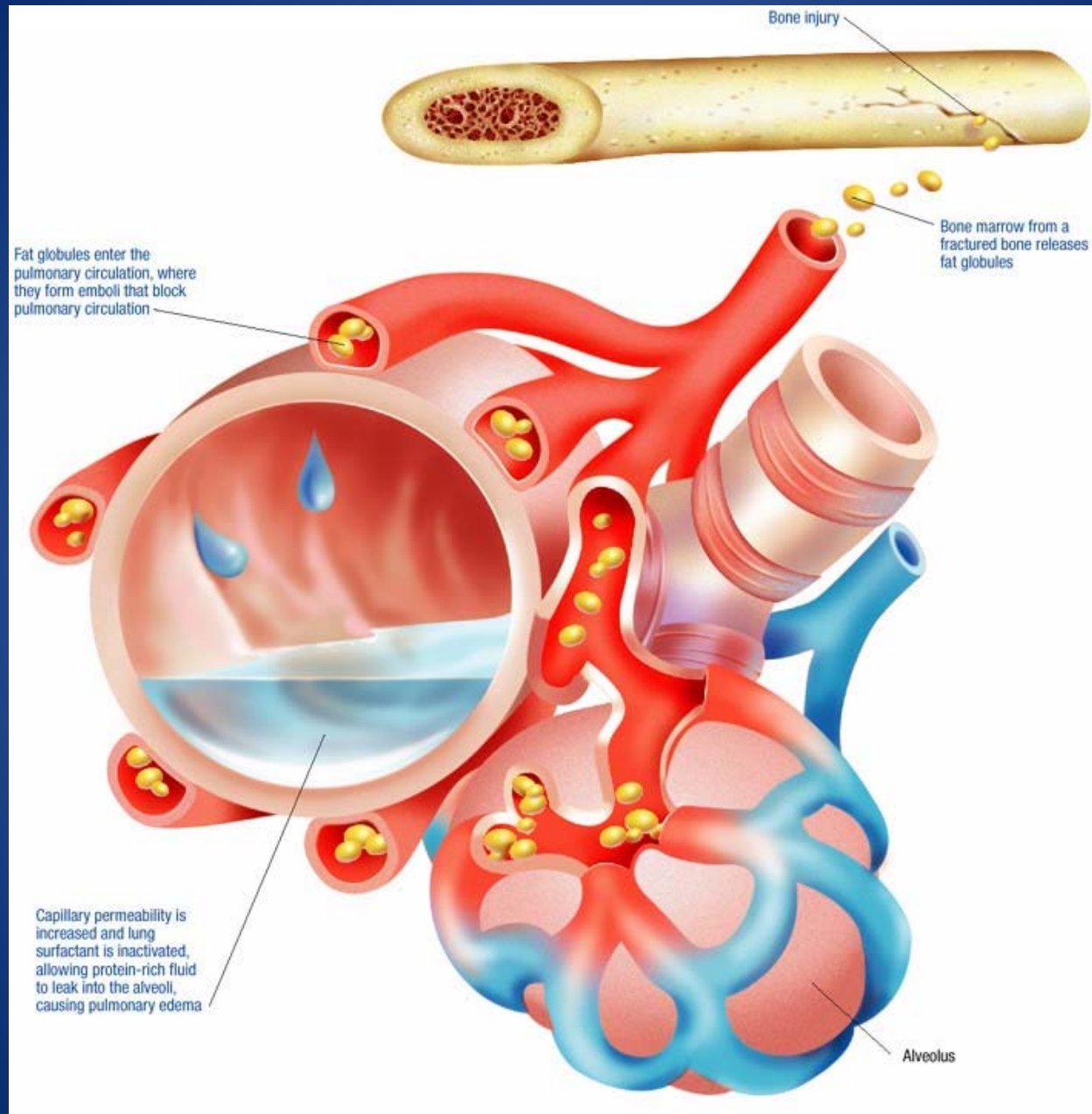
Does it Exist?

Todd McKinley

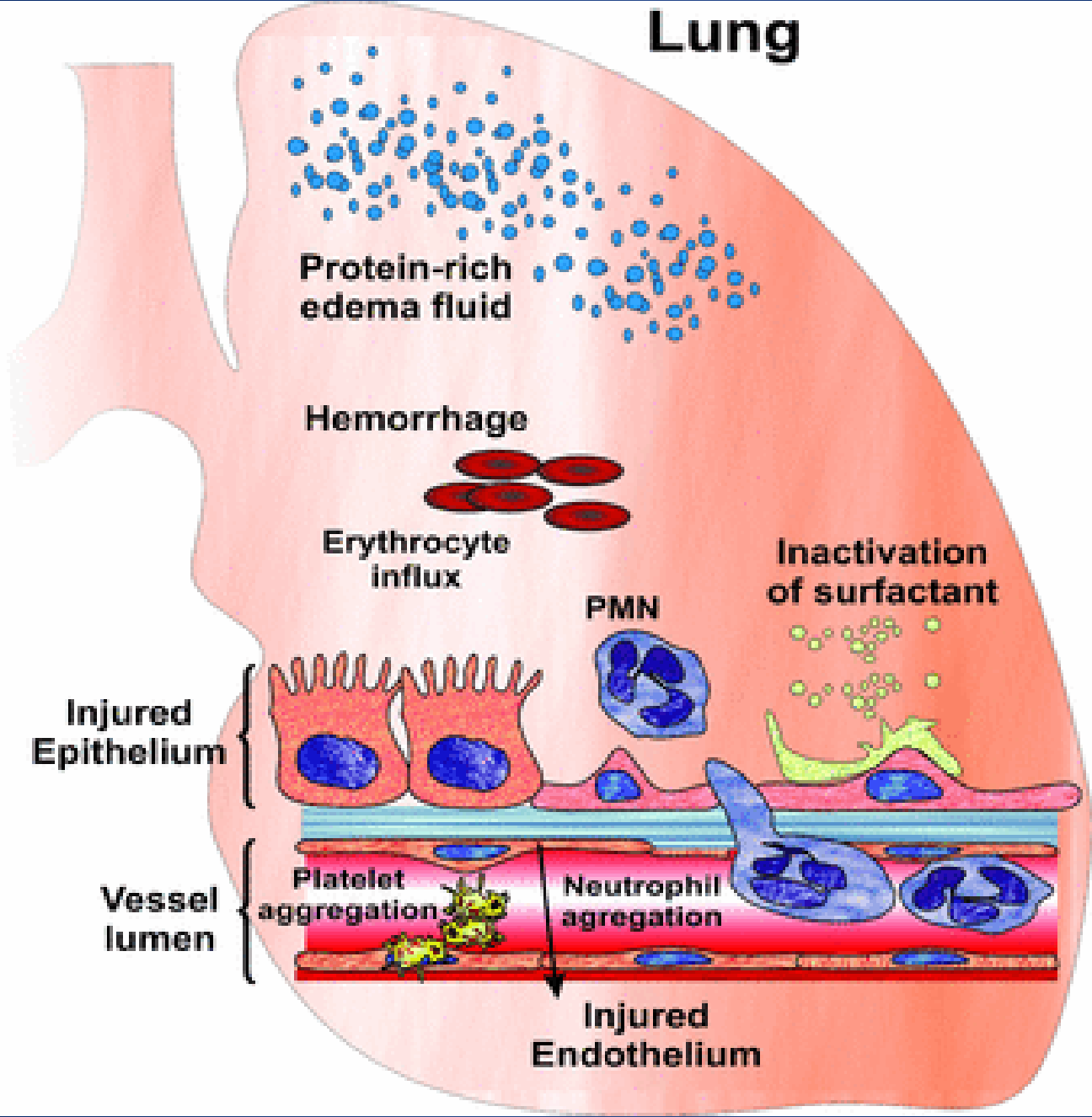
Department of Orthopaedic Surgery

University of Iowa



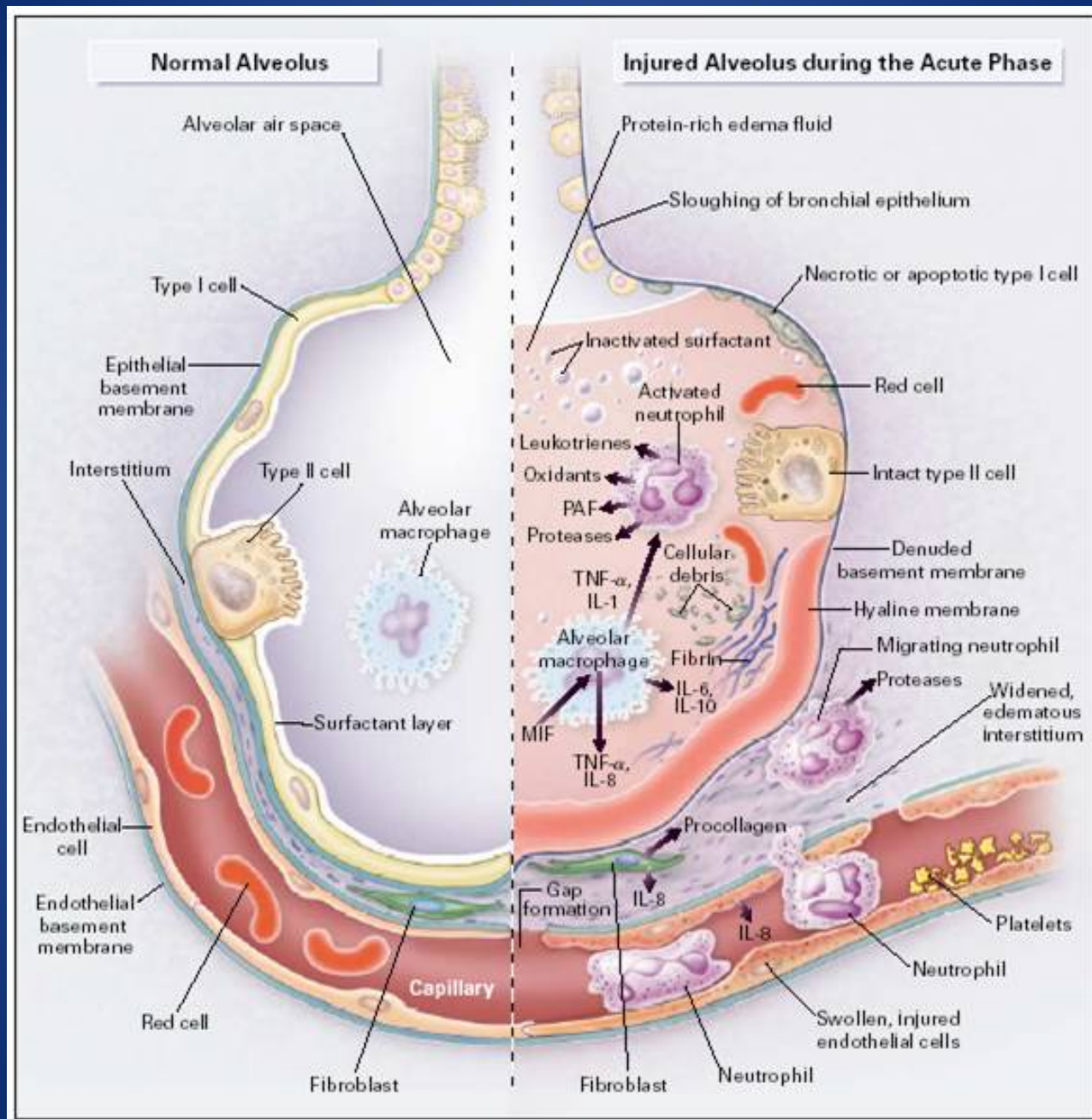


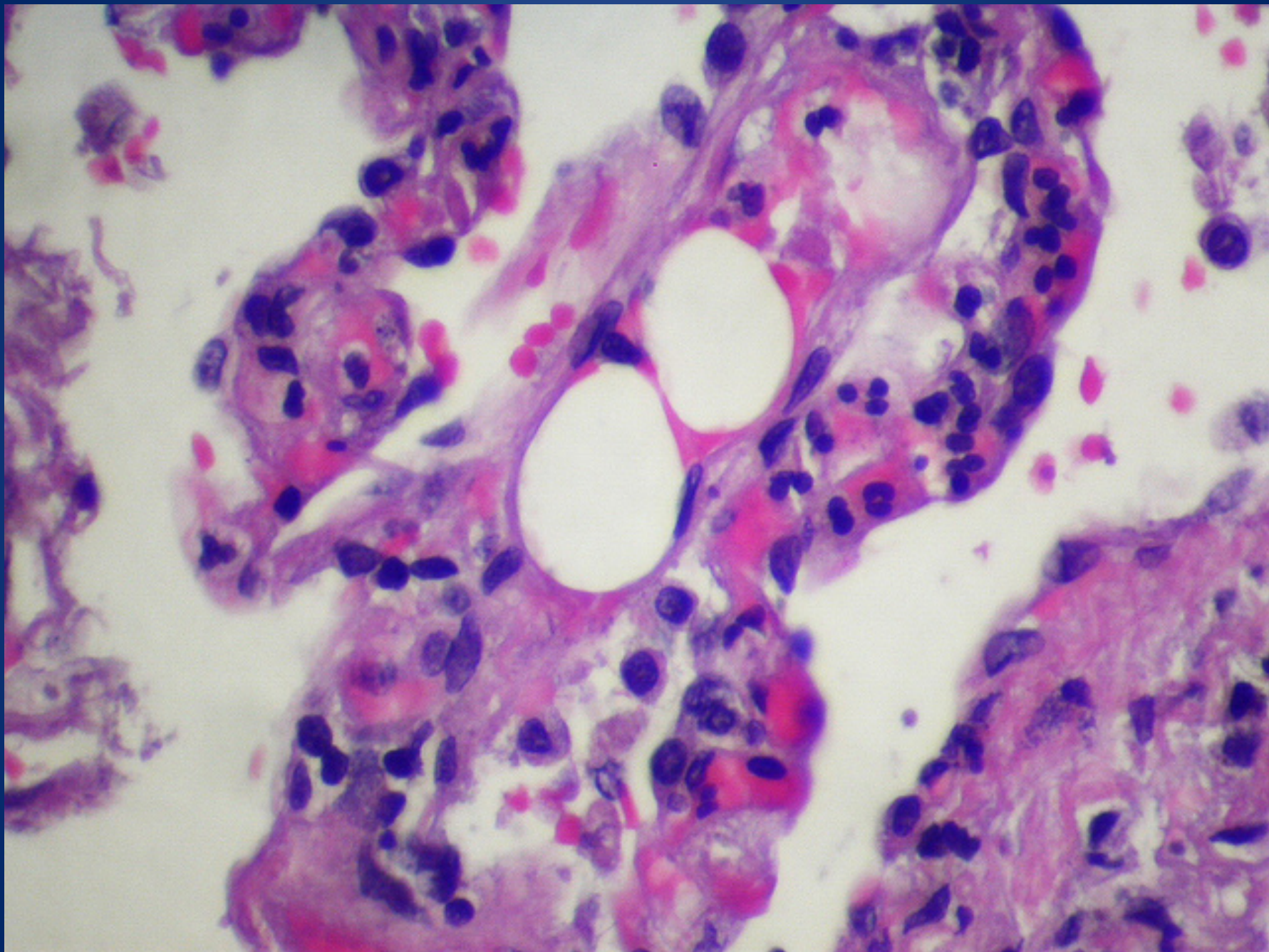
# Lung



# What Determines Lung Inflammation?

- This is an immune mediated process with a multitude of factors that incite and more importantly AMPLIFY
- Specific part of the Immune system (T cells and B cells) has evolved to learn, adapt, and amplify
- Nonspecific Immunity is more immediate, doesn't care about learning, but does care about amplifying





# Lots of Things Can Make your Lungs Inflame

- Fat
- DAMPs
- PAMPs
  
- Fatty acid breakdown products are very immunogenic for non specific immunity.



## Major criteria

Petechial rash

Respiratory insufficiency

Cerebral involvement

## Minor criteria

Tachycardia

Fever

Retinal changes

Jaundice

Renal signs

Thrombocytopenia

Anemia

High erythrocyte sedimentation rate

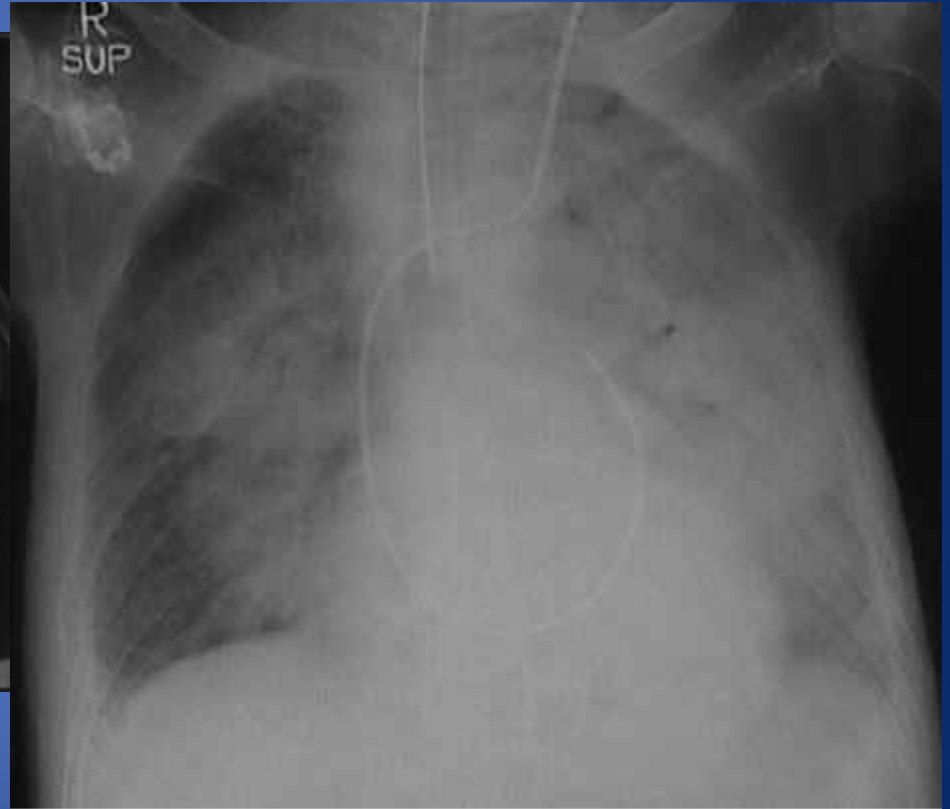
Fat macroglobinemia



Fat Embolism



ARDS



# Treatment

- Still, only effective Rx is pulmonary support
- Failed treatments of the past include antiinflammatory (steroids that failed miserably), membrane stabilization (failed)
- Triglyceride stabilizing agents (experimental and equivocal)
- Important to recognize respiratory distress early and begin supportive treatment aggressively